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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,360	01/16/2004	Peter Visconti	MV-6076.1D	9925
27433	7590	05/01/2008		
FOLEY & LARDNER LLP			EXAMINER	
321 NORTH CLARK STREET			MACNILL, ELIZABETH	
SUITE 2800			ART UNIT	PAPER NUMBER
CHICAGO, IL 60610-4764			3767	
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		05/01/2008	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/759,360	<b>Applicant(s)</b> VISCONTI ET AL.
	<b>Examiner</b> ELIZABETH R. MACNEILL	<b>Art Unit</b> 3767

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 March 2008.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 10-13, 16-28 and 58-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 10-13, 16-28 and 58-60 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/06)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 10,13,16,17,18,21-25, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by MINICK (US #5,462,256).

Minick teaches a "cartridge cassette (#10, Col 3 line 15) for use with an surgical irrigation pump having a pumping actuator, the cartridge cassette comprising: a pumping chamber (#22, Col 4, line 63) in fluid communication with a source of fluid and an irrigation conduit defined in part by a diaphragm (#16, Col 4 line 17) which is preloaded diaphragm is preloaded (#16 Col 4 line 17) against a reciprocating pump actuator (73); means for removably connecting the cartridge to the surgical irrigation pump to establish working communication with the pumping actuator (#71 ,Col 4 line 28); an upstream valve (#61, Col 5 line 6) disposed in the cartridge and in fluid communication with the source of fluid and the pumping chamber; and a downstream valve (#62, Col 5 line 8) disposed in the cartridge and in fluid communication with the irrigation conduit and the pumping chamber. The cartridge cassette includes a tab receiving recess (#71, Col 4 line 28) and groove (see Fig 1 which shows the outer housing of the cartridge and grooves at the proximal and distal ends which are connected by the

housing to the recesses) which connect to a tab (71a). The diaphragm has a graduated cross-sectional thickness dimension such that the thickness dimension increases from a central portion of the diaphragm to radially outward portions of the diaphragm (Col 4 lines 24-35).

Minick teaches "A cartridge cassette (#10, Col 3 line 15) for use with an surgical irrigation pump having a pumping actuator, the cartridge cassette comprising: a pumping chamber (#22, Col 4 line 63) in fluid communication with a source of fluid and an irrigation conduit; a tab-receiving groove (#71, Col 4 line 28) in the cartridge cassette which is adapted to mate with a laterally outwardly projecting tab on the surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump to establish working communication with the pumping actuator; an upstream valve (#61, Col 5 line 6) disposed in the cartridge and in fluid communication with the source of fluid and the pumping chamber; and a downstream valve (#62, Col 5 line 8) disposed in the cartridge and in fluid communication with the irrigation conduit and the pumping chamber.

Minick teaches "A cartridge cassette (#10, Col 3 line 15) adapted to mate with a surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump to establish working communication with a pumping actuator, the cartridge cassette comprising: a pumping chamber (#22, Col 4 line 63); a flexible diaphragm covering the pumping chamber (#16 Col 4 line 17); an upstream valve (#61, Col 5 line 6) disposed in the cartridge adapted for fluid communication with a source of fluid and the pumping chamber; and a

downstream valve (#62, Col 5 line 8) disposed in the cartridge adapted for fluid communication with an irrigation conduit and the pumping chamber.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-13, 17-22, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natwick (US 5,158,437) in view of ATKINSON (US #5,647,852) Natwick teaches a pump cartridge (Fig 16-19) comprising a pumping chamber (360) with a diaphragm (340) cooperating with a pump actuator (325; means for removably connecting the cartridge to a pump (see door 78 and latch 80, Fig 2). The examiner notes that this door is depicted in a separate embodiment, but a door sensor is shown in Fig 23 (288) of the same embodiment, which would suggest to one of ordinary skill in the art to use a door similar to the door shown in Fig 2 with the present embodiment. The device further includes inlet and outlet ports (306 and 308) which are parallel (Fig 16 and 17). Natwick does not teach spring loaded poppet valves in the inlet and outlet ports. Atkinson (#106, Col 4 line 13) discloses the use of spring loaded (110) poppet valves in a medical cartridge.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to make the cartridge cassette of Natwick with the spring-loaded poppet valves of Atkinson for improved flow characteristics over other valve choices.

As to claim 11,18 see tubing 312, 310 in Fig 16.

As to claim 13,17 see tab recesses along ports 308/306 which interact with tabs 316-314 of the air-in-line sensors. The cartridge is also held with interacting covers 94/92 in Fig 2 and latch 80.

1. Claims 16, 23-28 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natwick and Atkinson as applied to claims above, and further in view of Minick.

Natwick and Atkinson do not teach a diaphragm with a graduated cross-section. Minick teaches a pump cartridge with a graduated cross section diaphragm (Fig 3, 17). It would have been obvious to one ordinary skill in the art at the time the invention was made to use a graduated cross section since it has been held that improving similar devices in the same way is within the skill of an ordinary worker in the art.

#### ***Response to Arguments***

1. Applicant's arguments filed 24 March 2008 have been fully considered but they are not persuasive. Applicant has argued that the valves of Minick are coaxial and not parallel. The examiner believes that something can be coaxial and parallel, for example a dual-lumen catheter which has two coaxial lumens (a "tube in a tube") which are also considered parallel.

**Conclusion**

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH R. MACNEILL whose telephone number is (571)272-9970. The examiner can normally be reached on 9:00-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Sirmons can be reached on (571) 272-4965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth R MacNeill/  
Examiner, Art Unit 3767  
/Kevin C. Sirmons/  
Supervisory Patent Examiner, Art Unit 3767